



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Arid Vik Confirmation No: 7002  
Appl. No. : 09/787,902  
Filed : July 20, 2001  
Title : PRODUCTION OF HYDROGEN AND CARBON WITH A  
CARBON BLACK CATALYST

TC/A.U. : 1754  
Examiner : S. Hendrickson

Docket No.: ARIL3991/REF  
Customer No: 23364

**REPLY BRIEF UNDER 37 CFR §41.41**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This reply brief is responsive to the Examiner's Answer mailed July 31, 2006, and is filed by the initial due date of September 30, 2006.

At the outset, Appellant wishes to note that a Substitute Appeal Brief was timely filed in response to the requirement in the Official Action mail August 8, 2006 issued by Toi Johnson, Patent Appeal Manager. The Substitute Appeal Brief was filed at the USPTO after the Examiner's Answer of July 31, was mailed.

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On page 4 of the Examiner's Answer, it is stated that the argument that claim 5 requires recycling is not persuasive since it is never stated what is recycled or when. Moreover, it is urged for the first time, that this argument is inconsistent with the attempted amendment submitted after-final in which it was proposed to recite recycling of the gas. However, this is the Examiner's conclusion which is believed to be erroneous. The proposed amendment did not raise a new issue and should have been entered as, at the very least it would have clarified the issues on appeal.

Specifically, claim 5, as originally presented specified that the method of producing hydrogen and carbon was in a **closed** process. This closed process is clearly shown in Figure 1 and described in the specification, see pages 3 and 4. The term "closed" was rejected in the first Official Action as not being understood. This term was replaced with "recycling" to clarify the process in light of the level of one of ordinary skill in the art to which the invention pertains and the description of the process in the specification and original figure filed with the application. The plain and ordinary meaning of recycle, as it appears in the Tenth Edition of Webster's collegiate dictionary is, "1: to pass again through a series of changes or treatments . . ."

Accordingly, it is most respectfully submitted that one of ordinary skill in the art would clearly understand from the context of the specification, the term "in a recycling process" simply means that a (retentate) proportion of the material exiting the reaction chamber is fed back in at the other end so that the reactants will undergo many passes through the chamber. This is in complete contrast to the prior art relied on in the rejections which are linear processes where the reactants pass through the chamber only once. The specific contents of the recycled portion, i.e., whether it includes gas, carbon or a mixture thereof is not considered essential to understand this feature although, typically it will be a mixture of mainly gas and some carbon that has not yet reached a trappable size. Clearly claim 5 includes recycling and this claim limitation cannot be ignored.

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In this regard, on rereading the brief, it is noted that the section entitled "Claim 5 is clear and consistent and requires recycling," makes reference to the separate cycle of trapping, crushing and returning carbon to the chamber. This may have caused some confusion and Appellant wishes to make it clear, as would be appreciated by one of ordinary skill in the art to which the invention pertains, that this is not the recycling implied by the term "in a recycling process" in the claim and as would be understood by one of ordinary skill in the art to which the invention pertains.

The Examiner's Answer states that the rejection with respect to Voet is a 102/103 rejection not a separate 102 rejection followed by a separate 103 rejection. As noted in MPEP Section 2131.03 II, a 35 U.S.C. 102/103 combination rejection is permitted if it is unclear if the reference teaches the range with "sufficient specificity." The examiner must, in this case, provide reasons for anticipation as well as a motivational statement regarding obviousness. It is most respectfully submitted that the separate presentation of the arguments in Appellant's brief meets the issues raised in the combination rejection. The arguments in the section with respect 102 aspect of the rejection meet the anticipation aspect of the 102/103 rejection. The arguments in the brief in the 103 section related to the motivational aspect of the 102/103 rejection. For the reasons of record, the 102/103 rejection should be withdrawn.

Moreover, it is now understood from the Examiner's Answer that the possible "obviousness" aspect of the rejection over Voet has been withdrawn in view of the statement on page 4 of the Examiner's answer that "there is no obviousness " rejection over Voet. Since all of the claim limitations, including the recycling limitation, are not present in Voet, this rejection is untenable and should be withdrawn.

The remaining points and issues raised in the Examiner's Answer are believed to be fully covered in Appellant's brief and are herein incorporated by reference.

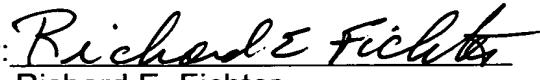
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## CONCLUSION

In view of the further arguments here present and those set forth in Appellant's brief, none of the rejections of the claims on appeal should be sustained. All of the rejections on appeal should be reversed and the application passed to issue.

Respectfully submitted,

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